

# INTERNATIONAL STANDARD



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**Industrial-process control valves –  
Part 2-3: Flow capacity – Test procedures**





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**Industrial-process control valves –  
Part 2-3: Flow capacity – Test procedures**

INTERNATIONAL  
ELECTROTECHNICAL  
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## **INDUSTRIAL-PROCESS CONTROL VALVES –**

### **Part 2-3: Flow capacity – Test procedures**

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International Standard IEC 60534-2-3 has been prepared by subcommittee 65B: Measurement and control devices, of IEC technical committee 65: Industrial-process measurement, control and automation.

The third edition cancels and replaces the second edition published in 1997, of which it constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Addition of informative Annexes B, C, D, E and F.
- b) Organizational and formatting changes were made to group technically related subject matter.

The text of this standard is based on the following documents:

FDIS	Report on voting
65B/1025/FDIS	65B/1028/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60534 series, published under the general title *Industrial-process control valves*, can be found on the IEC website.

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## INDUSTRIAL-PROCESS CONTROL VALVES –

### Part 2-3: Flow capacity – Test procedures

#### 1 Scope

This part of IEC 60534 is applicable to industrial-process control valves and provides the flow capacity test procedures for determining the following variables used in the equations given in IEC 60534-2-1:

- a) flow coefficient  $C$ ;
- b) liquid pressure recovery factor without attached fittings  $F_L$ ;
- c) combined liquid pressure recovery factor and piping geometry factor of a control valve with attached fittings  $F_{LP}$ ;
- d) piping geometry factor  $F_P$ ;
- e) pressure differential ratio factors  $x_T$  and  $x_{TP}$ ;
- f) valve style modifier  $F_d$ ;
- g) Reynolds number factor  $F_R$ .

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60534-1, *Industrial-process control valves – Part 1: Control valve terminology and general considerations*

IEC 60534-2-1:2011, *Industrial-process control valves – Part 2-1: Flow capacity – Sizing equations for fluid flow under installed conditions*

IEC 60534-8-2, *Industrial-process control valves – Part 8-2: Noise considerations – Laboratory measurement of noise generated by hydrodynamic flow through control valves*

IEC 61298-1, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 1: General considerations*

IEC 61298-2, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 2: Tests under reference conditions*

#### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60534-1, IEC 60534-2-1, IEC 61298-1, and IEC 61298-2 apply.